

REMARKS

The Amendment is submitted in response to a non-final Office Action mailed July 10, 2009. Claims 41, 42, 44, 45, 47-64, 66, 67, and 69-80 are currently pending, with claims 50-62 and 72-80 withdrawn from consideration. Claims 41, 42, 44, 45, 47-64, 66, 67, and 69-80 are currently pending in this application, with claims 50-62 and 72-80 withdrawn from consideration. Claims 41, 42, 49, 63, 64 and 71 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting. Claims 41, 42, 44, 45, 47-49, 63, 64, 66, 67, and 69-71 stand rejected under 35 U.S.C. §103(a). Claims 41, 42, 29, 63, 64 and 71 stand rejected under 35 U.S.C. §102(b). In response, Applicants have amended claims 41, 42, 44, 45, 47-49, and 63, and have added new claims 81-86. No new material has been added by way of these amendments.

In the current Response, Applicants have amended claims 41 and 63 to require a carbon content in the reactive phase of the anode material to range from about 10 wt% to about 40 wt%. Support for this amendment can be found throughout the examples, including specifically in Tables 1-6, 4-1, 6-2, 6-3, 7-1 and 7-2. Applicants have also added dependent claims 81-86, which emphasize another aspect of the claimed invention, in which the anode mixture layer containing the anode material also includes another anode active material that is capable of inserting and extracting lithium, specifically a carbonaceous material. Support for this amendment can be found in the Applicants' specification, including [0059]-[0060] and [0081]. The amendments to claims 41, 42, 44, 45, 47-49, and 63 establish or correct dependencies.

In the Office Action, the Patent Office states that a number of claims are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting. Specifically, the Patent Office has provisionally rejected claim 63 in view of 11/267,641; claims 41, 42, 63, and 64 over 12/026,594; claims 41, 49, 63, and 71 over 11/268,010; claim 63 over 11/267,116; and claims 41, 42, 63 and 64 over 11/225,540. Applicants take note of these rejections. Applicants also note that neither this application or nor any of applications asserted by the Patent Office have been granted as a patent with issued claims. At such a time as either this application or any of the other applications issues as a patent, the remaining applications may be examined in view of the issued claims and any possible amendments made to the claims remaining in prosecution

to determine if indeed an obviousness rejection is appropriate and if a terminal disclosure is required. Until that time, the rejections remain provisional.

In the Office Action, claims 41, 42, 49, 63, 64 and 71 are rejected under §102(b) as anticipated by U.S. 6,203,944 (“Turner”). The Patent Office alleges that Turner discloses, in Examples 17 and 19, anodes having tin, iron, and either 6 wt% carbon or 7.2 wt% carbon, respectively. Applicants respectfully question whether this combination meets the claim aspect because, as Turner notes from the X-ray diffraction, the two tin metal species present are Sn₂Fe and SnFe₃C. The carbon content of SnFe₃C is only 4.1%, and it is unclear where the bulk of the carbon has gone. However, in order to expedite prosecution, Applicants have amended claims 41 and 63 to require that the carbon content in the reaction phase range from about 10% to about 40% by weight. Applicants assert that 10 wt% is neither taught nor suggested by Turner. Therefore, Applicants respectfully request the rejection be withdrawn.

In the Office Action, claims 41, 42, 47-49, 63, 64, and 69-71 are rejected under §103(a) being unpatentable over JP 2000-311681 (hereinafter “Kawakami.”) The Patent Office has agreed that the disclosure in Kawakami of anode materials only supplies the limitation of carbon in a Sn-Co anode material at weight percents of 0.8% by weight, 1.4% by weight, and 3.9% by weight. In the Office Action, claims 41, 42, 48, 49, 63, 64, 70, and 71 are also rejected under §103(a) as being unpatentable over WO 01/48840 (hereinafter “Dahn.”). As in the rejection of Kawakami above, the Patent Office has agreed that the disclosure in Dahn only supplies the limitation of carbon in an Sn-metal anode of 4.0% weight. In both of these rejections, the Patent Office has asserted that while 5% to 40% weight is not expressly taught by either reference, it would have been obvious to one of ordinary skill in the art to modify that disclosure because obviousness of ranges that do not overlap may still exist if the ranges are close enough that one would not expect a difference in properties. Furthermore, the Patent Office asserts that there is no evidence of criticality in claimed range.

In the previous response, Applicants provided several bases for why the claimed invention is non-obvious in view of these references, and why evidence of criticality exists for the claimed ranges. In response, the Patent Office has disagreed with these assessments. In particular, the Examiner asserts that the criticality of 5 wt% remains unproven and is therefore not distinguished from the disclosure in Dahn and Kawakami. In those references, the closest

point demonstrated was for about 3 wt% and 4 wt%. Because these points fall between, the two data points in the Experimental details -2 wt% which was unsatisfactory and 5 wt% which was satisfactory - the Patent Office asserts that 4 wt% is close enough that one of ordinary skill would not expect different properties.

Applicants disagree with this analysis. The closest value that Dahn or Kawakami demonstrate are below the claimed range. They neither overlap with nor are encompassed by the claimed range. The balance of the disclosure in both is much lower. However, in order to expedite prosecution, Applicants have amended the claims to recite a lower value of about 10 %wt carbon in the reaction phase of the anode material. Applicants assert that 10 wt% is neither taught nor suggested by either Dahn or Kawakami. Therefore, Applicants respectfully request the rejection be withdrawn.

For the reasons set forth above, Applicants respectfully assert that the claimed invention is neither anticipated nor obvious in view of the asserted references. Applicants request that the rejections be withdrawn and further submit that the present application is in condition for allowance.

The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing. If such a withdrawal is made, please indicate the Attorney Docket No. 3712174-491 on the account statement.

Respectfully submitted,

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Dated: October 8, 2009